

REMARKS

Favorable reconsideration and allowance of the subject application are respectfully solicited.

Status of the Claims

Claims 1-11 and 18-22 are currently under consideration in this application, with Claims 1, 9 and 19 being independent. Claims 4, 5 and 7-11 are withdrawn from consideration. Claim 1 is amended herein to more clearly recite the features of the present invention. Support for the average particle size of the latex may be found in the specification at least at page 3, lines 24-25. Claims 18-22 are newly added. Support for these claims can be found throughout the originally-filed specification and claims, for example, at page 5, lines 5-11 (image formed before heating), page 6, lines 10-16 (coating amount of ink-receiving layer smaller on one side), and page 12, line 22 (transparent film). It is submitted that no new matter has been added by the amendments herein.

Section 103 Rejection

Claims 1-3 are rejected under 35 U.S.C. § 103(a) as allegedly obvious over Sakaki et al. (U.S. Patent No. 6,174,056) in view of either of Malhotra (U.S. Patent No. 6,180,238) or Cousin et al. (U.S. Patent No. 4,554,181). Applicant respectfully disagrees with this rejection as applied to the present claims.

Before addressing the merits of the rejection, Applicant believes it will be helpful to review some features and advantages of the present invention.

As recited in Claim 1, the present invention relates to a recording medium comprising a paper substrate having two surfaces, on both of which are provided an ink-receiving layer containing an inorganic pigment and an outermost surface layer consisting of thermoplastic latex resin. The outermost surface layer forms a transparent film upon heating of the recording medium. The average particle size of the latex is 0.1 to 1.0 μm .

As recited in Claim 9, the present invention also relates to a print comprising a substrate having two surfaces, on both of which are provided an ink-receiving layer containing an inorganic pigment and a layer consisting of latex resin. An image is formed on at least one of the ink receiving layers. The layer consisting of latex resin forms a transparent film upon heating of the print.

As recited in Claim 19, the present invention further relates to a recording medium comprising a paper substrate having two surfaces, on both of which are provided an ink-receiving layer containing an inorganic pigment and an outermost surface layer consisting of thermoplastic latex resin particles. The average size of the latex is 0.1 to 1.0 μm . The coating amount of the ink receiving layer of one side is smaller than the other.

In the present invention, the outermost layer has a porous structure and ink can penetrate it. Moreover, a recording material having excellent weather resistance is provided by heating the outermost layer to form a film after an image is formed. In the present invention, the ink-receiving layers and the outermost layers are provided on both sides of a paper substrate to reduce curling of the recording medium. In Applicant's view, the cited references do not teach or suggest all the features of the claimed invention.

Sakaki et al. discloses that the upper layer has gloss and comprises a latex (col. 5, lines 50-51). The upper layer of Sakaki et al. is not seen to consist of latex resin, as required by Claims 1, 9 and 19. Coating liquid (2) compositions (for Mediums 1, 2 and 3) set forth at col. 9, line 59 to col. 10, line 30 of Sakaki et al. all appear to have components in addition to the latex. (Mediums 4-9 do not appear to have the upper latex layer.)

Moreover, it is submitted that Sakaki et al. does not fail to teach or suggest the thermoplastic latex resin particle size of 0.1 to 1.0 μm , nor does it provide an ink-receiving layer and outermost layer on both sides of a substrate in order to reduce curling.

The Examiner takes the position that in Sakaki et al., the outermost layer will form a film upon heating, Applicant, however, disagrees. In Sakaki et al., the outermost layer is heated in the process of producing the recording medium (see column 5, lines 36 to 46). Applicant submits, however, that the outermost layer does not form a film, and that if the outermost layer were to form a film, ink would not be absorbed. Applicant further submits that the reason why the outermost layer of Sakaki et al. does not form a film is because it does not consist of only latex, as is required by the present invention.

Both Malhotra and Cousin et al. are cited as teaching that both the front and the back surfaces of the recording sheet may be coated. Although both of these references state that the recording sheet exhibits reduced curling, Applicant submits that both of these references fail to disclose reduction of curling due to coating both surfaces: the comparative examples of Malhotra, and Cousin et al. show that curling is not reduced even if both surfaces are coated. Applicant further submits that both of these references reduce curling by using a recording sheet

that includes particular components therein, not by coating both sides of the substrate. (See, e.g., Malhotra at col. 46, lines 22-24.)

Malhotra and Cousin et al. do not teach or suggest an outermost layer consisting of thermoplastic latex resin, or the claimed particle size, and hence do not remedy the deficiencies of the Sakaki et al. reference. Accordingly, the present invention is not obvious over Sakaki et al. in view of either Malhotra or Cousin et al. Applicant concludes that none of the cited references, whether taken singly or in the combinations suggested by the Examiner, teaches or suggests all the features of the claimed invention. Thus, withdrawal of the Section 103 rejection is respectfully requested.

Section 102/Section 103 Rejection

Claims 1-3 and 6 are rejected under 35 U.S.C. § 102(e) as allegedly anticipated by, or in the alternative, under 35 U.S.C. § 103(a) as allegedly obvious over, Ashida et al. (U.S. Patent No. 6,357,871). The present application claims priority from Japanese Application No. 11-001832, filed January 7, 1999, which is before Ashida et al.'s U.S. filing date of November 26, 1999. A sworn English translation of this Japanese priority document was submitted in this application on March 13, 2002. Accordingly, Ashida et al. is not properly citable as prior art against the present application. Withdrawal of this rejection is respectfully requested.

Conclusion

Applicant submits that the present invention is patentably defined by independent Claims 1, 9 and 19. The dependent claims are allowable for the same reasons as

their respective independent claims, and because they recite features that are patentable in their own right. Individual consideration of the dependent claims is respectfully solicited.

Applicant also respectfully requests that this Amendment After Final Rejection be entered. This Amendment could not have been presented earlier as it was earnestly believed that the claims on file would be found allowable. Given the Examiner's familiarity with the application, Applicant believes that a full understanding and consideration of this Amendment would not require undue time or effort by the Examiner. Moreover, Applicant submits that this Amendment places the application in condition for allowance. Accordingly, entry of this Amendment is believed to be appropriate and such entry is respectfully requested.

The present application is in condition for allowance. Favorable consideration, withdrawal of the § 102 and 103 rejections set forth in the Office Action, rejoinder of withdrawn Claims 4, 5 and 7-11, and an early Notice of Allowance are respectfully requested.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,



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